## **WEST Search History**

Hide Items Restore Clear Cancel

DATE: Wednesday, January 10, 2007

Hide?	<u>Set</u> <u>Name</u>	Query	<u>Hit</u> Count
	DB=PC	SPB, USPT, USOC, EPAB, JPAB, DWPI; PLUR=YES; OP=ADJ	
Γ	L5	trichoderma same L4	5
Γ	L4	substitution same L3	26
Γ	L3	(modif\$4 or mutant or variant) same L2	· 283
Γ	L2	(gene or sequence or polynulceotide or clone or recombinant) same L1	1133
Γ	L1	(xylanase or (endo-1,4-beta-xylanase) or (1,4-beta-D-xylan with xylanohydrolase))	3779

END OF SEARCH HISTORY

#### => index bioscience medicine

INDEX 'ADISCTI, ADISINSIGHT, ADISNEWS, AGRICOLA, ANABSTR, ANTE, AQUALINE, AQUASCI, BIOENG, BIOSIS, BIOTECHABS, BIOTECHDS, BIOTECHNO, CABA, CAPLUS, CEABA-VTB, CIN, CONFSCI, CROPB, CROPU, DDFB, DDFU, DGENE, DISSABS, DRUGB, DRUGMONOG2, DRUGU, EMBAL, EMBASE, ...' ENTERED AT 11:13:05 ON 10 JAN 2007

583 FILE JICST-EPLUS 1822 FILE LIFESCI 1526 FILE MEDLINE 42 FILE NTIS 45 FILES SEARCHED... 1 FILE NUTRACEUT 18 FILE OCEAN 2326 FILE PASCAL 48 FILES SEARCHED... 24 FILE PHIN 110 FILE PROMT 4 FILE RDISCLOSURE 3751 FILE SCISEARCH 819 FILE TOXCENTER 1759 FILE USPATFULL 61 FILES SEARCHED... 237 FILE USPAT2 404 FILE VETU 13 FILE WATER 1087 FILE WPIDS 7 FILE WPIFV 67 FILES SEARCHED... 1087 FILE WPINDEX

```
71 FILES IN THE FILE LIST IN STNINDEX
=> S (xylanase or (endo-1,4-beta-xylanase) or (1,4-beta-D-xylan (w) xylanohydrolase))
   1520 FILE AGRICOLA
    31 FILE ANABSTR
    79 FILE ANTE
    7 FILE AQUALINE
   72 FILE AQUASCI
   1436 FILE BIOENG
   4110 FILE BIOSIS
   2653 FILE BIOTECHABS
   2653 FILE BIOTECHDS
   1363 FILE BIOTECHNO
13 FILES SEARCHED...
   2279 FILE CABA
   7346 FILE CAPLUS
   874 FILE CEABA-VTB
   29 FILE CIN
   111 FILE CONFSCI
    13 FILE CROPB
   20 FILE CROPU
    3 FILE DDFB
   10 FILE DDFU
   3568 FILE DGENE
   168 FILE DISSABS
    3 FILE DRUGB
    10 FILE DRUGU
    17 FILE EMBAL
   1600 FILE EMBASE
   1765 FILE ESBIOBASE
30 FILES SEARCHED...
    8 FILE FOREGE
   490 FILE FROSTI
   1298 FILE FSTA
   2103 FILE GENBANK
    4 FILE HEALSAFE
   568 FILE IFIPAT
```

- 3 FILE IPA
- **8 FILE NAPRALERT**
- 50 FILE NLDB

#### 54 FILES HAVE ONE OR MORE ANSWERS, 71 FILES SEARCHED IN STNINDEX

L1 QUE (XYLANASE OR (ENDO-1,4-BETA-XYLANASE) OR (1,4-BETA-D-XYLAN (W) XYLANOHYDROLASE))

#### => d rank

- F1 7346 CAPLUS
- 4110 BIOSIS F2
- 3751 SCISEARCH
- F4 3568 DGENE
- F5 2653 BIOTECHABS
- 2653 BIOTECHDS F6
- F7 2326 PASCAL
- 2279 CABA F8
- F9 2103 GENBANK
- F10 1822 LIFESCI
- F11 1765 ESBIOBASE
- F12 1759 USPATFULL
- F13 1600 EMBASE
- F14 1526 MEDLINE
- F15 1520 AGRICOLA
- F16 1436 BIOENG
- 1363 BIOTECHNO F17
- 1298 FSTA
- F18 1087 WPIDS F19
- 1087 WPINDEX F20
- F21 874 CEABA-VTB
- F22 819 TOXCENTER
- F23 583 JICST-EPLUS
- F24 568 IFIPAT
- 490 FROSTI F25

## => file f1-f3, f5, f7-f8, f10, f12, f14-f16, f19

FILE 'CAPLUS' ENTERED AT 11:17:17 ON 10 JAN 2007 USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT. PLEASE SEE "HELP USAGETERMS" FOR DETAILS. COPYRIGHT (C) 2007 AMERICAN CHEMICAL SOCIETY (ACS)

FILE 'BIOSIS' ENTERED AT 11:17:17 ON 10 JAN 2007 Copyright (c) 2007 The Thomson Corporation

FILE 'SCISEARCH' ENTERED AT 11:17:17 ON 10 JAN 2007 Copyright (c) 2007 The Thomson Corporation

## FILE 'BIOTECHABS' ACCESS NOT AUTHORIZED

FILE 'PASCAL' ENTERED AT 11:17:17 ON 10 JAN 2007 Any reproduction or dissemination in part or in full, by means of any process and on any support whatsoever is prohibited without the prior written agreement of INIST-CNRS. COPYRIGHT (C) 2007 INIST-CNRS. All rights reserved.

FILE 'CABA' ENTERED AT 11:17:17 ON 10 JAN 2007 COPYRIGHT (C) 2007 CAB INTERNATIONAL (CABI)

FILE 'LIFESCI' ENTERED AT 11:17:17 ON 10 JAN 2007 COPYRIGHT (C) 2007 Cambridge Scientific Abstracts (CSA)

FILE 'USPATFULL' ENTERED AT 11:17:17 ON 10 JAN 2007 CA INDEXING COPYRIGHT (C) 2007 AMERICAN CHEMICAL SOCIETY (ACS)

FILE 'MEDLINE' ENTERED AT 11:17:17 ON 10 JAN 2007

FILE 'AGRICOLA' ENTERED AT 11:17:17 ON 10 JAN 2007

FILE 'BIOENG' ENTERED AT 11:17:17 ON 10 JAN 2007 COPYRIGHT (C) 2007 Cambridge Scientific Abstracts (CSA)

FILE 'WPIDS' ENTERED AT 11:17:17 ON 10 JAN 2007 COPYRIGHT (C) 2007 THE THOMSON CORPORATION

=> S L1

4 FILES SEARCHED...

L2 28962 L1

=> S (gene or sequence or polynulceotide or clone or recombinant)(s) L2

5184 (GENE OR SEQUENCE OR POLYNULCEOTIDE OR CLONE OR RECOMBINANT)(S)

=> S (modif? or mutant# or variant#)(s) L3

730 (MODIF? OR MUTANT# OR VARIANT#)(S) L3

=> S (addition or deletion or substitution)(s)L4

178 (ADDITION OR DELETION OR SUBSTITUTION)(S) L4

=> S substitution(s)L4

108 SUBSTITUTION(S) L4

=> S trichoderma(s) L6

66 TRICHODERMA(S) L6

=> S trichoderma(s) L5

70 TRICHODERMA(S) L5

=> duprem L8

DUPREM IS NOT A RECOGNIZED COMMAND

The previous command name entered was not recognized by the system. For a list of commands available to you in the current file, enter

"HELP COMMANDS" at an arrow prompt (=>).

=> dup rem L8

PROCESSING COMPLETED FOR L8

69 DUP REM L8 (1 DUPLICATE REMOVED)

=> dup rem L7

PROCESSING COMPLETED FOR L7

65 DUP REM L7 (1 DUPLICATE REMOVED) L10

=> d ibib abs L9 1-69

L9 ANSWER 1 OF 69 USPATFULL on STN

ACCESSION NUMBER: 2006:315223 USPATFULL << LOGINID::20070110>>

TITLE: and use thereof

Modified enzymes, methods to produce modified enzymes

INVENTOR(S): Clarkson, Kathleen A., Palo Alto, CA, UNITED STATES

Fenel, Fred, Helsinki, FINLAND

NUMBER KIND DATE

PATENT INFORMATION: US 2006270006 Al 20061130

APPLICATION INFO.: US 2004-565954 A1 20040910 (10)

WO 2004-US29575 20040910

20060731 PCT 371 date

NUMBER DATE

PRIORITY INFORMATION: US 2003-503251P 20030915 (60)

DOCUMENT TYPE: Utility

APPLICATION FILE SEGMENT:

LEGAL REPRESENTATIVE: Lynn Marcus Wyner, Genencor International Inc, 925 Page

Mill Road, Palo Alto, CA, 94304-1013, US

NUMBER OF CLAIMS: 32

EXEMPLARY CLAIM:

NUMBER OF DRAWINGS: 21 Drawing Page(s)

LINE COUNT:

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The invention is directed to modified xylanases having increased stability in harsh industrial environments, such as increased pH and/or temperature.

## CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L9 ANSWER 2 OF 69 USPATFULL on STN

2006:124709 USPATFULL << LOGINID::20070110>> ACCESSION NUMBER:

TITLE:

Promoters and proteins from Clostridium thermocellum

and uses thereof

Wu, J.H. David, Pittsford, NY, UNITED STATES INVENTOR(S):

Newcomb, Michael, Rochester, NY, UNITED STATES

#### NUMBER KIND DATE

PATENT INFORMATION: US 2006105442 A1 20060518 APPLICATION INFO.: US 2005-271287 A1 20051110 (11)

#### NUMBER DATE

PRIORITY INFORMATION: US 2004-626686P 20041110 (60)

US 2004-626661P 20041110 (60)

DOCUMENT TYPE:

Utility

FILE SEGMENT: APPLICATION

LEGAL REPRESENTATIVE: Noreen L. Connolly, Nixon Peabody LLP, Clinton Square,

P.O. Box 31051, Rochester, NY, 14603-1051, US

NUMBER OF CLAIMS: 81 1

EXEMPLARY CLAIM:

NUMBER OF DRAWINGS: 17 Drawing Page(s)

LINE COUNT:

2591

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The present invention relates to an inducible and a high expression nucleic acid promoter isolated from Clostridium thermocellum. These promoters are useful for directing expression of a protein or polypeptide encoded by a nucleic acid molecule operably associated with the nucleic acid promoters. The present invention also relates to nucleic acid constructs including the C. thermocellum promoters, and expression vectors and hosts containing such nucleic acid constructs. The present invention also relates to protein isolated from Clostridium thermocellum, including a repressor protein. The present invention also provides methods of using the isolated promoters and proteins from Clostridium thermocellum, including methods for directing inducible in vitro and in vivo expression of a protein or polypeptide in a host, and methods of producing ethanol from a cellulosic biomass.

## CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L9 ANSWER 3 OF 69 USPATFULL on STN **DUPLICATE 1** 

2005:247215 USPATFULL << LOGINID::20070110>> ACCESSION NUMBER:

Modified xylanases exhibiting improved expression TITLE:

White, Theresa, Ottawa, CANADA INVENTOR(S):

Giroux, Genevieve R., Gloucester, CANADA

Wallace, Katie E. A., Nepean, CANADA

PATENT ASSIGNEE(S): IOGEN BIO-PRODUCTS CORPORATION (non-U.S. corporation)

#### NUMBER KIND DATE

PATENT INFORMATION: US 2005214410 Al 20050929 APPLICATION INFO.: US 2005-88725 A1 20050325 (11)

#### NUMBER DATE

PRIORITY INFORMATION: US 2004-556061P 20040325 (60)

DOCUMENT TYPE: Utility

FILE SEGMENT: APPLICATION

LEGAL REPRESENTATIVE: SUGHRUE MION, PLLC, 2100 PENNSYLVANIA AVENUE, N.W.,

SUITE 800, WASHINGTON, DC, 20037, US

NUMBER OF CLAIMS:

EXEMPLARY CLAIM:

NUMBER OF DRAWINGS: 10 Drawing Page(s)

LINE COUNT:

2613

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB A modified Family 11 xylanase enzyme comprising a sequence that introduces a functional consensus glycosylation site is provided. Non-limiting examples of introduced glycosylation sites include mutation of the amino acid at position 34, 131, 180, 182, or a combination thereof, to an asparagine. The indicated amino acid position in the Family 11 xylanase is determined from sequence alignment of the xylanase of interest with that of a Trichoderma reesei xylanase II amino acid sequence. The introduced consensus glycosylation site facilitates increased expression efficiency of the modified xylanase when compared to the expression efficiency of a corresponding xylanase from which the modified xylanase was derived, using similar host strains and growth conditions.

#### CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L9 ANSWER 4 OF 69 USPATFULL on STN

2005:215706 USPATFULL << LOGINID::20070110>> ACCESSION NUMBER:

TITLE:

Secreted and transmembrane polypeptides and nucleic acids encoding the same

INVENTOR(S):

Ashkenazi, Avi J., San Mateo, CA, UNITED STATES

Baker, Kevin P., Damestown, MD, UNITED STATES Botstein, David, Belmont, CA, UNITED STATES

Desnoyers, Luc, San Francisco, CA, UNITED STATES

Eaton, Dan L., San Rafael, CA, UNITED STATES

Ferrara, Napoleone, San Francisco, CA, UNITED STATES

Fong, Sherman, Alameda, CA, UNITED STATES

Gerber, Hanspeter, San Francisco, CA, UNITED STATES

Gerritsen, Mary E., San Mateo, CA, UNITED STATES

Goddard, Audrey, San Francisco, CA, UNITED STATES

Godowski, Paul J., Hillsborough, CA, UNITED STATES Grimaldi, J. Christopher, San Francisco, CA, UNITED

STATES

Gurney, Austin L., Belmont, CA, UNITED STATES

Kljavin, Ivar J., Lafayette, CA, UNITED STATES

Napier, Mary A., Hillsborough, CA, UNITED STATES

Pan, James, Belmont, CA, UNITED STATES

Paoni, Nicholas F., Belmont, CA, UNITED STATES

Roy, Margaret Ann, San Francisco, CA, UNITED STATES Stewart, Timothy A., San Francisco, CA, UNITED STATES

Tumas, Daniel, Orinda, CA, UNITED STATES

Watanabe, Colin K., Moraga, CA, UNITED STATES

Williams, P. Mickey, Half Moon Bay, CA, UNITED STATES

Wood, William I., Hillsborough, CA, UNITED STATES

Zhang, Zemin, Foster City, CA, UNITED STATES

PATENT ASSIGNEE(S): Genentech, Inc., South San Francisco, CA, UNITED STATES (U.S. corporation)

#### NUMBER KIND DATE

PATENT INFORMATION: US 2005187382 A1 20050825

APPLICATION INFO.: US 2004-950374 A1 20040923 (10)

RELATED APPLN. INFO.: Continuation of Ser. No. US 2001-992521, filed on 14

Nov 2001, ABANDONED Continuation of Ser. No. US 2001-941992, filed on 28 Aug 2001, PENDING Continuation

of Ser. No. WO 2000-US8439, filed on 30 Mar 2000,

PENDING Continuation-in-part of Ser. No. US 380137,

ABANDONED A 371 of International Ser. No. WO

1999-US12252, filed on 2 Jun 1999

#### NUMBER DATE

PRIORITY INFORMATION: US 1998-97979P 19980826 (60)

DOCUMENT TYPE: Utility

FILE SEGMENT: APPLICATION

LEGAL REPRESENTATIVE: HELLER EHRMAN LLP, 275 MIDDLEFIELD ROAD, MENLO PARK, CA, 94025-3506, US

NUMBER OF CLAIMS: EXEMPLARY CLAIM:

NUMBER OF DRAWINGS: 330 Drawing Page(s)

LINE COUNT: 30348

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The present invention is directed to novel polypeptides and to nucleic acid molecules encoding those polypeptides. Also provided herein are vectors and host cells comprising those nucleic acid sequences, chimeric polypeptide molecules comprising the polypeptides of the present invention fused to heterologous polypeptide sequences, antibodies which bind to the polypeptides of the present invention and to methods for producing the polypeptides of the present invention.

## CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L9 ANSWER 5 OF 69 USPATFULL on STN

2005:131264 USPATFULL << LOGINID::20070110>> ACCESSION NUMBER:

TITLE: Secreted and transmembrane polypeptides and nucleic

acids encoding the same

INVENTOR(S): Ashkenazi, Avi J., San Mateo, CA, UNITED STATES

Baker, Kevin P., Damestown, MD, UNITED STATES Botstein, David, Belmont, CA, UNITED STATES

Desnoyers, Luc, San Francisco, CA, UNITED STATES

Eaton, Dan L., San Rafael, CA, UNITED STATES

Ferrara, Napoleone, San Francisco, CA, UNITED STATES Fong, Sherman, Alameda, CA, UNITED STATES

Gerber, Hanspeter, San Francisco, CA, UNITED STATES

Gerritsen, Mary E., San Mateo, CA, UNITED STATES

Goddard, Audrey, San Francisco, CA, UNITED STATES

Godowski, Paul J., Hillsborough, CA, UNITED STATES

Grimaldi, J. Christopher, San Francisco, CA, UNITED

STATES

Gurney, Austin L., Belmont, CA, UNITED STATES

Kljavin, Ivar J., Lafayette, CA, UNITED STATES

Napier, Mary A., Hillsborough, CA, UNITED STATES

Pan, James, Belmont, CA, UNITED STATES

Paoni, Nicholas F., Belmont, CA, UNITED STATES

Roy, Margaret Ann, San Francisco, CA, UNITED STATES

Stewart, Timothy A., San Francisco, CA, UNITED STATES

Tumas, Daniel, Orinda, CA, UNITED STATES

Watanabe, Colin K., Moraga, CA, UNITED STATES

Williams, P. Mickey, Half Moon Bay, CA, UNITED STATES

Wood, William I., Hillsborough, CA, UNITED STATES

Zhang, Zemin, Foster City, CA, UNITED STATES

PATENT ASSIGNEE(S): Genentech, Inc., South San Francisco, CA, UNITED STATES (U.S. corporation)

#### KIND DATE NUMBER

PATENT INFORMATION: US 2005112725 A1 20050526

APPLICATION INFO.: US 2004-978255 A1 20041029 (10)

RELATED APPLN. INFO.: Continuation of Ser. No. US 2001-989862, filed on 19

Nov 2001, PENDING Continuation of Ser. No. US

2001-941992, filed on 28 Aug 2001, PENDING Continuation

of Ser. No. WO 2000-US8439, filed on 30 Mar 2000,

PENDING Continuation-in-part of Ser. No. US 380137,

ABANDONED A 371 of International Ser. No. WO

1999-US12252, filed on 2 Jun 1999

#### NUMBER DATE

PRIORITY INFORMATION: US 1999-141037P 19990623 (60)

US 1998-88810P 19980610 (60)

DOCUMENT TYPE: Utility

APPLICATION FILE SEGMENT:

LEGAL REPRESENTATIVE: HELLER EHRMAN WHITE & MCAULIFFE LLP, 275 MIDDLEFIELD

ROAD, MENLO PARK, CO, 94025-3506, US

NUMBER OF CLAIMS: 24

EXEMPLARY CLAIM: 1-118

NUMBER OF DRAWINGS: 330 Drawing Page(s)

LINE COUNT:

38226

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The present invention is directed to novel polypeptides and to nucleic acid molecules encoding those polypeptides. Also provided herein are vectors and host cells comprising those nucleic acid sequences, chimeric polypeptide molecules comprising the polypeptides of the present invention fused to heterologous polypeptide sequences, antibodies which bind to the polypeptides of the present invention and to methods for producing the polypeptides of the present invention.

## CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L9 ANSWER 6 OF 69 USPATFULL on STN

ACCESSION NUMBER: 2005;223268 USPATFULL << LOGINID::20070110>>

TITLE: Enhanced expression of proteins in genetically modified

fungi

INVENTOR(S):

White, Theresa C., Ottawa, CANADA

McHugh, Sylvia, Gloucester, CANADA

Hindle, Christopher D., Gloucester, CANADA

PATENT ASSIGNEE(S): Iogen Energy Corporation, Ontario, CANADA (non-U.S. corporation)

#### NUMBER KIND DATE

PATENT INFORMATION: US 6939704 B1 20050906 APPLICATION INFO.: US 1999-392476 19990909 (9)

RELATED APPLN. INFO.: Continuation-in-part of Ser. No. US 1998-37524, filed

on 10 Mar 1998, Pat. No. US 6015703

DOCUMENT TYPE:

Utility

FILE SEGMENT:

GRANTED

PRIMARY EXAMINER:

Wax, Robert A.

LEGAL REPRESENTATIVE: Fitzpatrick, Cella, Harper & Scinto

NUMBER OF CLAIMS:

27

EXEMPLARY CLAIM:

11

NUMBER OF DRAWINGS:

15 Drawing Figure(s); 11 Drawing Page(s)

LINE COUNT: 2652

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The present invention relates to increasing the production of a protein of interest from a fugal host. The invention discloses nucleotide sequences comprising, a regulatory region in operative association with xylanase secretion sequence and a gene of interest. The gene of interest encodes a protein selected from a pharmaceutical, nutraceutical, industrial, animal feed, food additive and an enzyme. Preferably, the gene of interest encodes a cellulase, hernicellulase, a lignin degrading enzyme, pectinase, protease, or peroxidase. The present invention also relates to vectors and hosts comprising these nucleic acid sequences, and to methods for the production of a protein of interest.

## CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L9 ANSWER 7 OF 69 USPATFULL on STN

2003:324681 USPATFULL << LOGINID::20070110>> ACCESSION NUMBER:

TITLE:

Secreted and transmembrane polypeptides and nucleic

acids encoding the same

INVENTOR(S): Ashkenazi, Avi J., San Mateo, CA, UNITED STATES

Baker, Kevin P., Darnestown, MD, UNITED STATES Botstein, David, Belmont, CA, UNITED STATES

Desnoyers, Luc, San Francisco, CA, UNITED STATES

Eaton, Dan L., San Rafael, CA, UNITED STATES

Ferrara, Napoleone, San Francisco, CA, UNITED STATES

Fong, Sherman, Alameda, CA, UNITED STATES

Gerber, Hanspeter, San Francisco, CA, UNITED STATES Gerritsen, Mary E., San Mateo, CA, UNITED STATES

Goddard, Audrey, San Francisco, CA, UNITED STATES

Godowski, Paul J., Hillsborough, CA, UNITED STATES

Grimaldi, J. Christopher, San Francisco, CA, UNITED

STATES

Gurney, Austin L., Belmont, CA, UNITED STATES

Kljavin, Ivar J., Lafayette, CA, UNITED STATES

Napier, Mary A., Hillsborough, CA, UNITED STATES

Pan, James, Belmont, CA, UNITED STATES Paoni, Nicholas F., Belmont, CA, UNITED STATES Roy, Margaret Ann, San Francisco, CA, UNITED STATES Stewart, Timothy A., San Francisco, CA, UNITED STATES Tumas, Daniel, Orinda, CA, UNITED STATES Watanabe, Colin K., Moraga, CA, UNITED STATES Williams, P. Mickey, Half Moon Bay, CA, UNITED STATES Wood, William I., Hillsborough, CA, UNITED STATES Zhang, Zemin, Foster City, CA, UNITED STATES

PATENT ASSIGNEE(S): Genentech, Inc. (U.S. corporation)

#### NUMBER KIND DATE

PATENT INFORMATION: US 2003228656 A1 20031211 APPLICATION INFO.: US 2001-992643 A1 20011114 (9) RELATED APPLN. INFO.: Continuation of Ser. No. US 2001-941992, filed on 28 Aug 2001, PENDING Continuation of Ser. No. WO 2000-US8439, filed on 30 Mar 2000, PENDING Continuation of Ser. No. WO 1999-US30095, filed on 16 Dec 1999, PENDING Continuation of Ser. No. US 380137, PENDING A 371 of International Ser. No. WO 1999-US12252, filed on 2 Jun 1999, PENDING

#### NUMBER DATE

PRIORITY INFORMATION: US 1998-113296P 19981222 (60)

US 1998-88742P 19980610 (60)

DOCUMENT TYPE:

Utility

FILE SEGMENT:

APPLICATION

LEGAL REPRESENTATIVE: Paul E. Rauch, Ph.D., Brinks, Hofer, Gilson & Lione, NBC Tower - Suite 3600, 455 N. Cityfront Plaza Drive,

Chicago, IL, 60611-5599

NUMBER OF CLAIMS:

118

EXEMPLARY CLAIM:

NUMBER OF DRAWINGS: 330 Drawing Page(s)

LINE COUNT:

32378

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The present invention is directed to novel polypeptides and to nucleic acid molecules encoding those polypeptides. Also provided herein are vectors and host cells comprising those nucleic acid sequences, chimeric polypeptide molecules comprising the polypeptides of the present invention fused to heterologous polypeptide sequences, antibodies which bind to the polypeptides of the present invention and to methods for producing the polypeptides of the present invention.

## CAS INDEXING IS AVAILABLE FOR THIS PATENT.

#### L9 ANSWER 8 OF 69 USPATFULL on STN

ACCESSION NUMBER: 2003:324680 USPATFULL << LOGINID::20070110>>

TITLE: Secreted and transmembrane polypeptides and nucleic

acids encoding the same

Ashkenazi, Avi J., San Mateo, CA, UNITED STATES INVENTOR(S): Baker, Kevin P., Darnestown, MD, UNITED STATES Botstein, David, Belmont, CA, UNITED STATES Desnoyers, Luc, San Francisco, CA, UNITED STATES

Eaton, Dan L., San Rafael, CA, UNITED STATES Ferrara, Napoleone, San Francisco, CA, UNITED STATES Fong, Sherman, Alameda, CA, UNITED STATES Gerber, Hanspeter, San Francisco, CA, UNITED STATES Gerritsen, Mary E., San Mateo, CA, UNITED STATES Goddard, Audrey, San Francisco, CA, UNITED STATES Godowski, Paul J., Hillsborough, CA, UNITED STATES

Grimaldi, J. Christopher, San Francisco, CA, UNITED **STATES** 

Gurney, Austin L., Belmont, CA, UNITED STATES Kljavin, Ivar J., Lafayette, CA, UNITED STATES Napier, Mary A., Hillsborough, CA, UNITED STATES Pan, James, Belmont, CA, UNITED STATES

Paoni, Nicholas F., Belmont, CA, UNITED STATES

Roy, Margaret Ann, San Francisco, CA, UNITED STATES

Stewart, Timothy A., San Francisco, CA, UNITED STATES Tumas, Daniel, Orinda, CA, UNITED STATES Watanabe, Colin K., Moraga, CA, UNITED STATES Williams, P. Mickey, Half Moon Bay, CA, UNITED STATES Wood, William I., Hillsborough, CA, UNITED STATES Zhang, Zemin, Foster City, CA, UNITED STATES

PATENT ASSIGNEE(S): Genentech, Inc. (U.S. corporation)

#### NUMBER KIND DATE

PATENT INFORMATION: US 2003228655 A1 20031211

US 7070955 B2 20060704

APPLICATION INFO .: US 2001-989733 A1 20011120 (9)

RELATED APPLN. INFO.: Continuation of Ser. No. US 2001-941992, filed on 28 Aug 2001, PENDING Continuation of Ser. No. WO 2000-US8439, filed on 30 Mar 2000, PENDING Continuation

of Ser. No. US 380137, PENDING A 371 of International Ser. No. WO 1999-US12252, filed on 2 Jun 1999, PENDING

#### NUMBER DATE

PRIORITY INFORMATION: US 1999-141037P 19990623 (60)

US 1998-95916P 19980810 (60)

DOCUMENT TYPE: Utility

FILE SEGMENT: APPLICATION

LEGAL REPRESENTATIVE: Paul E. Rauch, Ph.D., Brinks, Hofer, Gilson & Lione,

NBC Tower - Suite 3600, 455 N. Cityfront Plaza Drive,

Chicago, IL, 60611-5599

NUMBER OF CLAIMS: 118

EXEMPLARY CLAIM: 1

NUMBER OF DRAWINGS: 330 Drawing Page(s)

LINE COUNT: 32385

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The present invention is directed to novel polypeptides and to nucleic acid molecules encoding those polypeptides. Also provided herein are vectors and host cells comprising those nucleic acid sequences, chimeric polypeptide molecules comprising the polypeptides of the present invention fused to heterologous polypeptide sequences, antibodies which bind to the polypeptides of the present invention and to methods for producing the polypeptides of the present invention.

## CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L9 ANSWER 9 OF 69 USPATFULL on STN

ACCESSION NUMBER: 2003:318615 USPATFULL << LOGINID::20070110>>

TITLE: Secreted and transmembrane polypeptides and nucleic

acids encoding the same

INVENTOR(S): Ashkenazi, Avi J., San Mateo, CA, UNITED STATES

Baker, Kevin P., Darnestown, MD, UNITED STATES Botstein, David, Belmont, CA, UNITED STATES

Desnoyers, Luc, San Francisco, CA, UNITED STATES

Eaton, Dan L., San Rafael, CA, UNITED STATES

Ferrara, Napoleone, San Francisco, CA, UNITED STATES

Fong, Sherman, Alameda, CA, UNITED STATES Gerber, Hanspeter, San Francisco, CA, UNITED STATES

Gerritsen, Mary E., San Mateo, CA, UNITED STATES

Goddard, Audrey, San Francisco, CA, UNITED STATES

Godowski, Paul J., Hillsborough, CA, UNITED STATES

Grimaldi, J. Christopher, San Francisco, CA, UNITED

STATES

Gurney, Austin L., Belmont, CA, UNITED STATES

Kljavin, Ivar J., Lafayette, CA, UNITED STATES

Napier, Mary A., Hillsborough, CA, UNITED STATES Pan, James, Belmont, CA, UNITED STATES

Paoni, Nicholas F., Belmont, CA, UNITED STATES

Roy, Margaret Ann, San Francisco, CA, UNITED STATES

Stewart, Timothy A., San Francisco, CA, UNITED STATES

Tumas, Daniel, Orinda, CA, UNITED STATES

Watanabe, Colin K., Moraga, CA, UNITED STATES

Williams, P. Mickey, Half Moon Bay, CA, UNITED STATES

# Wood, William I., Hillsborough, CA, UNITED STATES Zhang, Zemin, Foster City, CA, UNITED STATES PATENT ASSIGNEE(S): Genentech, Inc. (U.S. corporation)

## NUMBER KIND DATE

PATENT INFORMATION: US 2003224358 A1 20031204

US 7112656 B2 20060926

APPLICATION INFO.: US 2001-997641 A1 20011115 (9)

RELATED-APPLN. INFO.: Continuation of Ser. No. US 2001-941992, filed on 28 Aug 2001, PENDING

#### NUMBER DATE

PRIORITY INFORMATION: WO 1997-US20069 19971105

WO 1998-US19330 19980916

WO 1998-US19437 19980917

WO 1998-US21141 19981007

WO 1998-US25108 19981201

WO 1999-US106 19990105

WO 1999-US5028 19990308

WO 1999-US12252 19990602

WO 1999-US21090 19990915

WO 1999-US21547 19990915

WO 1999-US28313 19991130

WO 1999-US28301 19991201

WO 1999-US28634 19991201

WO 1999-US30095 19991216

WO 1999-US30911 19990220

WO 2000-US219 20000105

WO 2000-US376 20000106

WO 2000-US3565 20000211

WO 2000-US4341 20000218

WO 2000-US4414 20000222

WO 2000-US4914 20000224

WO 2000-US5004 20000224

WO 2000-US5841 20000302

WO 2000-US6319 20000310

WO 2000-US6884 20000315

WO 2000-US7377 20000320 WO 2000-US8439 20000330

WO 2000-US13358 20000515

WO 2000-US14042 20000522

WO 2000-US15264 20000602

WO 2000-US13705 20000517

WO 2000-US14941 20000530 WO 2000-US20710 20000728

WO 2000-US22031 20000811

WO 2000-US23522 20000823

WO 2000-US23328 20000824

WO 2000-US30952 20001108

WO 2000-US32678 20001201

WO 2001-US6520 20010228

WO 2001-US17800 20010601

WO 2001-US19692 20010620 WO 2001-US21066 20010629

WO 2001-US21066 20010629

WO 2001-US21735 20010709

US 1997-49787P 19970616 (60) US 1997-62250P 19971017 (60)

US 1997-65186P 19971112 (60)

US 1997-65311P 19971113 (60)

US 1997-66770P 19971124 (60)

US 1998-75945P 19980225 (60) US 1998-78910P 19980320 (60)

US 1998-83322P 19980428 (60)

US 1998-84600P 19980507 (60)

US 1998-87106P 19980528 (60)

US 1998-87607P 19980602 (60)

US 1998-87609P 19980602 (60) US 1998-87759P 19980602 (60)

```
19980603 (60)
US 1998-87827P
                 19980604 (60)
US 1998-88021P
                 19980604 (60)
US 1998-88025P
                 19980604 (60)
US 1998-88026P
US 1998-88028P
                 19980604 (60)
US 1998-88029P
                 19980604 (60)
US 1998-88030P
                 19980604 (60)
US 1998-88033P
                 19980604 (60)
US 1998-88326P
                 19980604 (60)
                 19980605 (60)
US 1998-88167P
US 1998-88202P
                 19980605 (60)
US 1998-88212P
                 19980605 (60)
US 1998-88217P
                 19980605 (60)
                 19980609 (60)
US 1998-88655P
US 1998-88734P
                 19980610 (60)
                 19980610 (60)
US 1998-88738P
US 1998-88742P
                 19980610 (60)
US 1998-88810P
                 19980610 (60)
US 1998-88824P
                 19980610 (60)
US 1998-88826P
                 19980610 (60)
US 1998-88858P
                 19980611 (60)
US 1998-88861P
                 19980611 (60)
US 1998-88876P
                 19980611 (60)
US 1998-89105P
                 19980612 (60)
US 1998-89440P
                 19980616 (60)
                 19980616 (60)
US 1998-89512P
                 19980616 (60)
US 1998-89514P
                 19980617 (60)
US 1998-89532P
US 1998-89538P
                 19980617 (60)
                 19980617 (60)
US 1998-89598P
                 19980617 (60)
US 1998-89599P
US 1998-89600P
                 19980617 (60)
                 19980617 (60)
US 1998-89653P
US 1998-89801P
                 19980618 (60)
US 1998-89907P
                 19980618 (60)
US 1998-89908P
                 19980618 (60)
                 19980619 (60)
US 1998-89948P
US 1998-89952P
                 19980619 (60)
US 1998-90246P
                 19980622 (60)
US 1998-90252P
                 19980622 (60)
                 19980622 (60)
US 1998-90254P
US 1998-90349P
                 19980623 (60)
US 1998-90355P
                 19980623 (60)
US 1998-90429P
                 19980624 (60)
US 1998-90431P
                 19980624 (60)
US 1998-90435P
                 19980624 (60)
US 1998-90444P
                 19980624 (60)
                 19980624 (60)
US 1998-90445P
US 1998-90472P
                  19980624 (60)
US 1998-90535P
                 19980624 (60)
US 1998-90540P
                 19980624 (60)
US 1998-90542P
                 19980624 (60)
US 1998-90557P
                  19980624 (60)
US 1998-90676P
                 19980625 (60)
                  19980625 (60)
US 1998-90678P
US 1998-90690P
                  19980625 (60)
                  19980625 (60)
US 1998-90694P
                 19980625 (60)
US 1998-90695P
US 1998-90696P
                  19980625 (60)
                  19980626 (60)
US 1998-90862P
US 1998-90863P
                  19980626 (60)
US 1998-91360P
                  19980701 (60)
US 1998-91478P
                  19980702 (60)
US 1998-91544P
                  19980701 (60)
US 1998-91519P
                  19980702 (60)
US 1998-91626P
                  19980702 (60)
US 1998-91633P
                  19980702 (60)
US 1998-91628P
                  19980702 (60)
                  19980702 (60)
US 1998-91646P
US 1998-91673P
                  19980702 (60)
```

```
19980707 (60)
           US 1998-91978P
           US 1998-91982P
                            19980707 (60)
                             19980709 (60)
           US 1998-92182P
           US 1998-92472P
                             19980710 (60)
                             19980720 (60)
           US 1998-93339P
           US 1998-94651P
                             19980730 (60)
           US 1998-95282P
                             19980804 (60)
                             19980804 (60)
           US 1998-95285P
                             19980804 (60)
           US 1998-95302P
                             19980804 (60)
           US 1998-95318P
           US 1998-95321P
                             19980804 (60)
           US 1998-95301P
                             19980804 (60)
           US 1998-95325P
                             19980804 (60)
                             19980810 (60)
           US 1998-95916P
           US 1998-95929P
                             19980810 (60)
                             19980810 (60)
           US 1998-96012P
           US 1998-96143P
                             19980811 (60)
           US 1998-96146P
                             19980811 (60)
                             19980812 (60)
           US 1998-96329P
           US 1998-96757P
                             19980817 (60)
           US 1998-96766P
                             19980817 (60)
           US 1998-96768P
                             19980817 (60)
           US 1998-96773P
                             19980817 (60)
           US 1998-96791P
                            19980817 (60)
           US 1998-96867P
                             19980817 (60)
                             19980817 (60)
           US 1998-96891P
           US 1998-96894P
                             19980817 (60)
                             19980817 (60)
           US 1998-96895P
           US 1998-96897P
                             19980817 (60)
                             19980818 (60)
           US 1998-96949P
           US 1998-96950P
                             19980818 (60)
           US 1998-96959P
                             19980818 (60)
            US 1998-96960P
                             19980818 (60)
                             19980818 (60)
           US 1998-97022P
            US 1998-97141P
                             19980819 (60)
           US 1998-97218P
                             19980820 (60)
                             19980824 (60)
            US 1998-97661P
            US 1998-97952P
                             19980826 (60)
                             19980826 (60)
           US 1998-97954P
           US 1998-97955P
                             19980826 (60)
                             19980826 (60)
           US 1998-98014P
           US 1998-97971P
                             19980826 (60)
           US 1998-97974P
                             19980826 (60)
                             19980826 (60)
           US 1998-97978P
           US 1998-97986P
                             19980826 (60)
                             19980826 (60)
           US 1998-97979P
           US 1998-98525P
                             19980831 (60)
            US 1998-100634P
                             19980916 (60)
            US 1998-100858P
                             19980917 (60)
                             19981222 (60)
           US 1998-113296P
           US 1999-123957P
                             19990312 (60)
                             19990623 (60)
            US 1999-141037P
            US 1999-143048P
                             19990707 (60)
            US 1999-144758P
                             19990720 (60)
            US 1999-145698P
                             19990726 (60)
            US 1999-146222P
                             19990728 (60)
            US 1999-149396P
                             19990817 (60)
            US 1999-158663P
                             19991008 (60)
            US 2000-213637P
                             20000623 (60)
            US 2000-230978P
                             20000907 (60)
DOCUMENT TYPE:
                      Utility
                    APPLICATION
FILE SEGMENT:
LEGAL REPRESENTATIVE: HELLER EHRMAN WHITE & MCAULIFFE LLP, WO, 275
            MIDDLEFIELD ROAD, MENLO PARK, CO, 94025-3506
NUMBER OF CLAIMS:
                        118
EXEMPLARY CLAIM:
NUMBER OF DRAWINGS:
                          330 Drawing Page(s)
LINE COUNT:
                   32338
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
    The present invention is directed to novel polypeptides and to nucleic
```

acid molecules encoding those polypeptides. Also provided herein are vectors and host cells comprising those nucleic acid sequences, chimeric polypeptide molecules comprising the polypeptides of the present invention fused to heterologous polypeptide sequences, antibodies which bind to the polypeptides of the present invention and to methods for producing the polypeptides of the present invention.

## CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L9 ANSWER 10 OF 69 USPATFULL on STN

ACCESSION NUMBER: 2003:312259 USPATFULL << LOGINID::20070110>>

TITLE:

Secreted and transmembrane polypeptides and nucleic

acids encoding the same

Ashkenazi, Avi J., San Mateo, CA, UNITED STATES INVENTOR(S):

Baker, Kevin P., Darnestown, MD, UNITED STATES Botstein, David, Belmont, CA, UNITED STATES

Desnoyers, Luc, San Francisco, CA, UNITED STATES

Eaton, Dan L., San Rafael, CA, UNITED STATES

Ferrara, Napoleone, San Francisco, CA, UNITED STATES

Fong, Sherman, Alameda, CA, UNITED STATES

Gerber, Hanspeter, San Francisco, CA, UNITED STATES Gerritsen, Mary E., San Mateo, CA, UNITED STATES

Goddard, Audrey, San Francisco, CA, UNITED STATES Godowski, Paul J., Hillsborough, CA, UNITED STATES

Grimaldi, J. Christopher, San Francisco, CA, UNITED

STATES

Gurney, Austin L., Belmont, CA, UNITED STATES

Kljavin, Ivar J., Pacifica, CA, UNITED STATES

Napier, Mary A., Hillsborough, CA, UNITED STATES

Pan. James, Belmont, CA, UNITED STATES

Paoni, Nicholas F., Belmont, CA, UNITED STATES

Roy, Margaret Ann, San Francisco, CA, UNITED STATES

Stewart, Timothy A., San Francisco, CA, UNITED STATES

Tumas, Daniel, Orinda, CA, UNITED STATES

Watanabe, Colin K., Moraga, CA, UNITED STATES Williams, P. Mickey, Half Moon Bay, CA, UNITED STATES

Wood, William I., Hillsborough, CA, UNITED STATES

Zhang, Zemin, Foster City, CA, UNITED STATES

PATENT ASSIGNEE(S): Genentech, Inc. (U.S. corporation)

#### NUMBER KIND DATE

PATENT INFORMATION: US 2003219856 A1 20031127

APPLICATION INFO.: US 2002-219538 A1 20020814 (10)

RELATED APPLN. INFO.: Continuation of Ser. No. US 2001-941992, filed on 28

Aug 2001, PENDING Continuation of Ser. No. WO 2000-US8439, filed on 30 Mar 2000, PENDING Continuation

of Ser. No. WO 1999-US12252, filed on 2 Jun 1999,

PENDING

#### NUMBER DATE

PRIORITY INFORMATION: US 1999-141037P 19990623 (60)

US 1998-92182P 19980709 (60)

DOCUMENT TYPE: Utility

FILE SEGMENT: APPLICATION

LEGAL REPRESENTATIVE: Ginger R. Dreger, Knobbe Martens Olson & Bear, 16th

Floor, 620 Newport Center Drive, Newport Beach, CA,

92660

NUMBER OF CLAIMS: 118

EXEMPLARY CLAIM:

NUMBER OF DRAWINGS: 330 Drawing Page(s)

LINE COUNT: 32340

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

The present invention is directed to novel polypeptides and to nucleic acid molecules encoding those polypeptides. Also provided herein are vectors and host cells comprising those nucleic acid sequences, chimeric polypeptide molecules comprising the polypeptides of the present invention fused to heterologous polypeptide sequences, antibodies which bind to the polypeptides of the present invention and to methods for

## producing the polypeptides of the present invention.

#### CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L9 ANSWER 66 OF 69 WPIDS COPYRIGHT 2007 THE THOMSON CORP on STN ACCESSION NUMBER: 2002-171813 [22] WPIDS

DOC. NO. CPI: C2002-053231 [22]

TITLE:

Producing xylitol comprises culturing a microorganism having xylanolytic activity and a microorganism capable of converting pentose sugar to xylitol, in medium comprising polymer or oligomer materials containing

pentose sugars

DERWENT CLASS: D16; D17; E17

INVENTOR: H

HEIKKILA H; HEIKKILAE H; ILMEN M; OJAMO H; PENTTILA M;

PENTTILAE M; SARKKI M; UUSITALO J; VEHKOMAEKI M;

VEHKOMAKI M

PATENT ASSIGNEE: (

(DANI-N) DANISCO SWEETENERS OY; (XYRO-N) XYROFIN OY

COUNTRY COUNT:

95

## PATENT INFO ABBR.:

PATENT NO KIND DATE WEEK LA PG MAIN IPC

WO 2002006504 A1 20020124 (200222)\* EN 46[3] AU 2001082174 A 20020130 (200236) EN EP 1301618 A1 20030416 (200328) EN

US 20040014185 A1 20040122 (200407) EN

#### APPLICATION DETAILS:

PATENT NO KIND

APPLICATION DATE

WO 2002006504 A1 WO

WO 2001-FI663 20010711 US 2000-217926P 20000713

US 20040014185 A1 Provisional AU 2001082174 A

AU 2001-82174 20010711

EP 1301618 A1

EP 2001-960775 20010711

EP 1301618 A1

WO 2001-FI663 20010711

US 20040014185 A1 CIP of

WO 2001-FI663 20010711

US 20040014185 A1

US 2003-341220 20030113

## FILING DETAILS:

PATENT NO KIND

PATENT NO

AU 2001082174 A

Based on

WO 2002006504 A WO 2002006504 A

EP 1301618 A1 Based on WO 200200650

PRIORITY APPLN. INFO: US 2000-217926P 20000713 WO 2001-FI663 20010711 US 2003-341220 20030113

AN 2002-171813 [22] WPIDS

AB WO 2002006504 A1 UPAB: 20050525

NOVELTY - Producing (M) xylitol involves culturing a microorganism having xylanolytic activity, and a microorganism capable of converting a pentose sugar to xylitol, in a medium comprising polymer or oligomer materials containing pentose sugars to enable hydrolysis of the polymers or oligomers by the microorganism, bioconverting the hydrolysis products obtained, and recovering xylitol.

DETAILED DESCRIPTION - An INDEPENDENT CLAIM is also included for a microorganism (I) which has xylanolytic activity and which has been genetically modified to enhance its xylanolytic activity, and to reduce its xylitol metabolism.

USE - (M) is useful for production of xylitol (claimed).

ADVANTAGE - (M) enables the neutralization of a wide variety of raw materials. Due to its xylanolytic activity, the microorganisms used as a production organism is itself able to hydrolyze even complex xylan-containing raw materials. The microorganisms are capable of carrying out all the necessary reactions, from the hydrolysis of the raw material, by the metabolic conversion of the hydrolysis products, to the desired end product. The genetic modification of the microorganisms, irrespective of

whether it involves overexpression of genes encoding for xylanolytic activity, or blocking or inactivation of genes responsible for the further metabolism of xylitol, or both, leads to enhanced xylose production. The excess of xylose produced by the increased xylanolytic activity of the cells is further metabolized into xylitol, thus leading to enhanced xylitol production. The overall xylitol production rate thus by far exceeds the rate achieved by the use of conventional microorganisms.

L9 ANSWER 67 OF 69 USPATFULL on STN

ACCESSION NUMBER: 2000:7204 USPATFULL << LOGINID::20070110>>

TITLE: Genetic constructs and genetically modified microbes

for enhanced production of beta-glucosidase

INVENTOR(S): White, Theresa C., Ottawa, Canada

Hindle, Christopher D., Ottawa, Canada

PATENT ASSIGNEE(S): logen Corporation, Ottawa, Canada (non-U.S. corporation).

#### NUMBER KIND DATE

PATENT INFORMATION: US 6015703 20000118 APPLICATION INFO.: US 1998-37524 19980310 (9)

DOCUMENT TYPE: Utility FILE SEGMENT: Granted

PRIMARY EXAMINER: Wax, Robert A.

LEGAL REPRESENTATIVE: Fitzpatrick, Cella, Harper & Scinto

NUMBER OF CLAIMS: 29 EXEMPLARY CLAIM: 1

NUMBER OF DRAWINGS: 5 Drawing Figure(s); 4 Drawing Page(s)

LINE COUNT: 1680

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB This invention relates to the genetic modification of a microbe to enhance its production of an enzyme, beta-glucosidase, that is important in the cellulose conversion process. The inventors have discovered genetic constructs that, when expressed in recombinant microbes, dramatically increase the amount of beta-glucosidase produced relative to untransformed microbes. The genetic constructs comprise a promoter, a xylanase secretion signal, and a mature beta-glucosidase coding region. The increased level of beta-glucosidase significantly increases the efficiency of hydrolysis of cellulose to glucose by cellulase enzymes, thereby enhancing the production of fuel ethanol from cellulose.

## CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L9 ANSWER 68 OF 69 USPATFULL on STN

ACCESSION NUMBER: 1999:15764 USPATFULL << LOGINID::20070110>>

TITLE: Modification of xylanase to improve thermophilicity,

alkophilicity and thermostability

INVENTOR(S): Sung, Wing L., Gloucester, Canada

Yaguchi, Makoto, Ottawa, Canada Ishikawa, Kazuhiko, Tsukuba, Japan

PATENT ASSIGNEE(S): National Research Council of Canada, Ottawa, Canada (non-U.S. corporation)

## NUMBER KIND DATE

PATENT INFORMATION: US 5866408 19990202 APPLICATION INFO.: US 1998-47370 19980325

RELATED APPLN. INFO.: Division of Ser. No. US 1996-709912, filed on 9 Sep

1996, now patented, Pat. No. US 5759840

DOCUMENT TYPE: Utility FILE SEGMENT: Granted

PRIMARY EXAMINER: Carlson, Karen Cochrane

ASSISTANT EXAMINER: Stole, Einar

LEGAL REPRESENTATIVE: Fitzpatrick, Cella, Harper & Scinto

NUMBER OF CLAIMS: 8 EXEMPLARY CLAIM: 1

NUMBER OF DRAWINGS: 26 Drawing Figure(s); 26 Drawing Page(s)

LINE COUNT: 2501

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB Producing a \*\*\*xylanase\*\*\* enzyme of superior performance in the

bleaching of pulp. More specifically, a \*\*\*modified\*\*\* \*\*\*xylanase\*\*\* of Family 11 that shows improved thermophilicity, alkalophilicity, and thermostability as compared to the natural \*\*\*xylanase\*\*\* . The \*\*\*modified\*\*\* xylanases contain any of three types of \*\*\*modifications\*\*\* : (1) changing amino acids 10, 27, and 29 of \*\*\*Trichoderma\*\*\* reesei \*\*\*xylanase\*\*\* II or the corresponding amino acids of another Family 11 \*\*\*xylanase\*\*\* these amino acids are changed to histidine, methionine, and leucine, respectively; (2) \*\*\*substitution\*\*\* of amino acids in the N-terminal region with amino acids from another \*\*\*xylanase\*\*\* enzyme. In a preferred embodiment, \*\*\*substitution\*\*\* of the natural Bacillus circulans or \*\*\*Trichoderma\*\*\* reesei \*\*\*xylanase\*\*\* with a short \*\*\*sequence\*\*\* of amino acids from Thermomonospora fusca \*\*\*xylanase\*\*\* yielded chimeric xylanases with higher thermophilicity and alkalophilicity; (3) an extension upstream of the N-terminus of up to 10 amino acids. In a preferred embodiment, extension of the N-terminus of the \*\*\*xylanase\*\*\* with the tripeptide glycine-arginine-arginine improved its performance.

#### CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L9 ANSWER 69 OF 69 USPATFULL on STN

ACCESSION NUMBER: 1998:61459 USPATFULL << LOGINID::20070110>>

TITLE: Modification of xylanase to improve thermophilicity,

alkalophilicity and thermostability

INVENTOR(S): Sung, Wing L., Gloucester, Canada

Yaguchi, Makoto, Ottawa, Canada

Ishikawa, Kazuhiko, Tsukuba, Japan

PATENT ASSIGNEE(S): National Research Council of Canada, Ottawa, Canada (non-U.S. corporation)

#### NUMBER KIND DATE

PATENT INFORMATION: US 5759840 19980602 APPLICATION INFO.: US 1996-709912 19960909 (8)

DOCUMENT TYPE: Utility

FILE SEGMENT: Granted
PRIMARY EXAMINER: Grimes, Eric

PRIMARY EXAMINER: Grimes, Eric LEGAL REPRESENTATIVE: Fitzpatrick, Cella, Harper & Scinto

NUMBER OF CLAIMS: 17

EXEMPLARY CLAIM: 1

NUMBER OF DRAWINGS: 26 Drawing Figure(s); 26 Drawing Page(s)

LINE COUNT: 2394

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB Producing a \*\*\*xylanase\*\*\* enzyme of superior performance in the bleaching of pulp. More specifically, a \*\*\*modified\*\* \*\*\*xylanase\*\*\* of Family 11 that shows improved thermophilicity, alkalophilicity, and thermostability as compared to the natural \*\*\*xylanase\*\*\* . The \*\*\*modified\*\*\* xylanases contain any of three types of \*\*\*modifications\*\*\* : (1) changing amino acids 10, 27, and 29 of \*\*\*Trichoderma\*\*\* reesei \*\*\*xylanase\*\*\* II or the corresponding amino acids of another Family 11 \*\*\*xylanase\*\*\*, where these amino acids are changed to histidine, methionine, and leucine, respectively; (2) \*\*\*substitution\*\*\* of amino acids in the N-terminal region with amino acids from another \*\*\*xylanase\*\*\* enzyme. In a preferred embodiment, \*\*\*substitution\*\*\* of the natural Bacillus circulans or \*\*\*Trichoderma\*\*\* reesei \*\*\*xylanase\*\*\* with a short \*\*\*sequence\*\*\* of amino acids from Thermomonospora fusca \*\*\*xylanase\*\*\* yielded chimeric xylanases with higher thermophilicity and alkalophilicity; (3) an extension upstream of the

N-terminus of up to 10 amino acids. In a preferred embodiment, extension of the N-terminus of the \*\*\*xylanase\*\*\* with the tripeptide glycine-arginine-arginine improved its performance.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

=> d his

L1 QUE (XYLANASE OR (ENDO-1,4-BETA-XYLANASE) OR (1,4-BETA-D-XYLAN

L2 28962 S L1
L3 5184 S (GENE OR SEQUENCE OR POLYNULCEOTIDE OR CLONE OR RECOMBINANT)
L4 730 S (MODIF? OR MUTANT# OR VARIANT#)(S) L3
L5 178 S (ADDITION OR DELETION OR SUBSTITUTION)(S)L4
L6 108 S SUBSTITUTION(S)L4
L7 66 S TRICHODERMA(S) L6
L8 70 S TRICHODERMA(S) L5
L9 69 DUP REM L8 (1 DUPLICATE REMOVED)
L10 65 DUP REM L7 (1 DUPLICATE REMOVED)

=> log y